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ABSTRACT

Both cognitive and affective components in interests, attitudes, values, and appreciations are identified as well as problems in selecting objectives for the affective domain. The suggestions offered on how to best assess feelings draw on a variety of measurement techniques. The possibilities and problems involved in assessing student achievement of objectives in the affective domain are illustrated. The problems lie not only in the difficulty of appraising emotional responses that are often covert but also in selecting and defining objectives that are proper goals for the public schools. This means affective behavior that is of constructive value to the individual, that can be developed through school experience, that is not sectarian or politically partisan and is not an unwarranted invasion of privacy. When objectives meeting these conditions are identified and defined, it is possible to assess, at least crudely, the student's achievement of these behavior patterns. (Author/RC)

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Assessing Educational Achievement in the Affective Domain

Ralph W. Tyler

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ABOUT THIS REPORT

In recent years there has been a growing awareness of the need for schools to include the affective domain in the development of objectives for learning. Anyone who has tried to develop measurement instruments which determine the attainment of those objectives is well aware of the inherent frustrations involved. In this article, Ralph Tyler, one of the country's leading educators, identifies both cognitive and affective components in interests, attitudes, values and appreciations as well as problems in selecting objectives in the affective domain. The suggestions which Dr. Tyler offers on how best to assess feelings draw on a variety of measurement techniques.

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Through the years, Dr. Tyler has directed many professional educational organizations. Currently, he is President of the Systems Development Foundation, Director of the National Society for the Study of Education and Chairman of the American College Testing Program Board of Trustees, the National Commission for Cooperative Education, and the National Commission on Resources for Youth.

CJF

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Currently the subject of affective learning frequently comes up in discussions among educators. In this connection, references are being made to the narrowness of school programs that concentrate on cognitive objectives and give little or no attention to those in the affective domain. Evaluation projects are also criticized for their failure to appraise the impact of a course or program in terms of the affective development of students. This contemporary interest in evaluating affective learning furnishes an opportunity to consider what is meant by affective learning, what objectives in the affective domain are important in the school curriculum and how the achievement of these objectives may be assessed.

WHAT IS MEANT BY AFFECTIVE BEHAVIOR?

The analysis of human behavior into three chief categories, cognitive, affective and psychomotor, is a construct employed to differentiate certain aspects of human reactions roughly similar to the age-old distinctions between thinking, feeling, and acting. Few, if any, human reactions fall completely in one of these categories. In fact, most behavioral events accessible to consciousness involve all three aspects. Even in sleep, dreams in which we can recall thinking and feeling will commonly register some muscular activity on sensitive instruments. However, many human activities are classified in terms of one or another of these categories because this aspect stands out sharply or is of special concern. For example, solving a mathematical problem is commonly viewed as a cognitive activity even though it often involves writing numbers and is accompanied by some feeling tone. As another example, appreciating a poem is usually classified as an affective activity even though reading is usually viewed as cognitive and oral speech as psychomotor. Typing a letter is often placed in the psychomotor domain although it is clear that cognition is involved in much typing and a feeling tone usually accompanies the physical activity. It is important that the affective domain be understood to be a construct, not a real thing and that the labeling of certain reactions as affective behavior is to point out aspects of these reactions which have significant emotional or feeling components.

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WHY IS AFFECTIVE BEHAVIOR IMPORTANT IN EDUCATION?

Human feelings are important both as means and ends in education. There is a long history of educational discussion of pupil interests – an important factor in the voluntary involvement of students in school learning. One of the classical essays on this subject is John Dewey's *Interest and Effort in Education*, written at the turn of the century. Learning is relatively inefficient, if effective at all, when it is stimulated by coercion rather than by the genuine interest of the learners. Interest is commonly defined either as "liking something" or as "voluntarily attending to it or engaging in it." In the first definition, interest is a way of feeling about something and is , ipso facto, affective behavior. In the second definition, voluntary attention or direction of effort can be conceived as including cognitive aspects, too, but voluntary choice commonly involves some feeling about the attractiveness of the choice and, hence, most taxonomies place interests in the affective domain.

Other kinds of affective behavior are recognized as important means of education. For example, children give more attention to school work and direct their efforts more continuously when they feel that they are respected by the teacher and by other children. When they feel rejected, their attention and efforts are more scattered. Even the child's feeling about his own worth and competence is believed to be a significant factor in learning.

But affective behavior is not only important as means to education but also as ends. For example, interest in school work not only furnishes positive motivation for school learning, but in addition most schools attempt to help children develop interests in many areas of school learning. Among the most common educational objectives involving the pupil's development of interests are these: interest in reading, in music, in physical activities, in understanding natural phenomena, in working with other children.

Attitudes are also found in most lists of educational objectives. But this classification is somewhat ambiguous because an attitude as usually defined involves two major aspects, cognitive and affective. An objective attitude toward current social problems, for example, involves both the way one views social problems cognitively and the way one feels about them. In a course where the chief purpose is to help students understand the factors involved in certain social problems and the foreseeable consequences of proposed solutions, the primary emphasis is cognitive. In a course where the chief purpose is to help students enter sympathetically into the lives of those who are deeply affected by the social problems, the primary emphasis is affective. And there are courses where both outcomes are sought. In deciding whether to treat a certain attitude as cognitive behavior, affective behavior or both, the particular emphasis given by the school will be determining.

The term "values" is frequently used in discussions of important but commonly unmeasured educational achievements. This, also, when defined appears to have two emphases, one cognitive and the other affective. What one values, for example, jazz music, close friends, reputation for integrity, is in some way associated with one's cognitive map of reality, but how one feels about these things involves affective behavior. Again, the decision whether to treat an objective in which students are to be helped to develop a particular pattern of values as cognitive behavior, affective or both will be determined by the particular emphasis given in the school.

Another term that involves ambiguities in classification is "appreciation." In the fields of literature, art, and music this term is commonly found in statements of objectives. In some courses the term is defined as "knowing or recognizing the worth of certain works of art, music or literature." Knowing or being able to recognize worth would seem to be appropriate for the cognitive domain. On the other hand, in some courses, appreciation is defined in a way to include "responding emotionally to aesthetic characteristics in certain works of art, music, or literature." When the emphasis in a course includes an effort to help students respond with feeling to aesthetic characteristics in a work of art, it would appear to involve affective behavior. Again the emphasis given by the school to the term appreciation would determine whether the educational objective should be classified as cognitive, affective or both.

Psychometrists sometimes overlook the fact that educational objectives are patterns of behavior that a school or college selects as goals for student learning, that is, the school or college considers these patterns of behavior so important for their students to acquire that the teachers are expected to direct their efforts to help the students learn them. The selection of objectives is usually made prior to their classification for purposes of assessment. Hence, what the school or college meant by the objective is the basis for its definition, not a rigorous or neat definition derived from a given psychological theory. For this reason, in assessing educational achievement, the definitions of interests, attitudes, values and appreciations must be worked out with those responsible for the planning and execution of the curriculum.

PROBLEMS IN SELECTING OBJECTIVES IN THE AFFECTIVE DOMAIN

Since each educational objective identified in a curriculum serves as a goal toward which teaching and learning are directed, it should be a pattern of behavior that is important for the student to learn and one that can be learned under the conditions the school provides. It should not be frivolous nor incapable of attainment. Furthermore, since the time and resources of the school are limited, not all of the desirable behavior patterns can be taught in school. Those selected as educational objectives should be more valuable to the student and/or society than those which could not be selected because of the limitations in time and resources.

These criteria apply to all educational objectives, not just to those classified in the affective domain. However, there is a much longer history of experience in selecting cognitive objectives and psychomotor ones than in identifying affective goals. In the past, affective learning in the schools was not systematically planned or even considered. To a large extent, two prevalent beliefs operated to inhibit analyses of the learning of affective behavior. One was the view that the development of appropriate feelings was the task of home and church, not the school. The other was the belief that appropriate feelings developed automatically from knowledge and experience with content, and did not require any special pedagogical attention. Today educators recognize that although the home and other non-school institutions still have important roles to play in affective learning, there are objectives in the affective domain that are appropriate to the educational functions of the school and college. They also recognize that these objectives are not automatically attained when students develop relevant knowledge and have experiences with phenomena and their derivative content. So, today, the objectives commonly listed by schools and colleges include some that can clearly be classified in the affective domain.

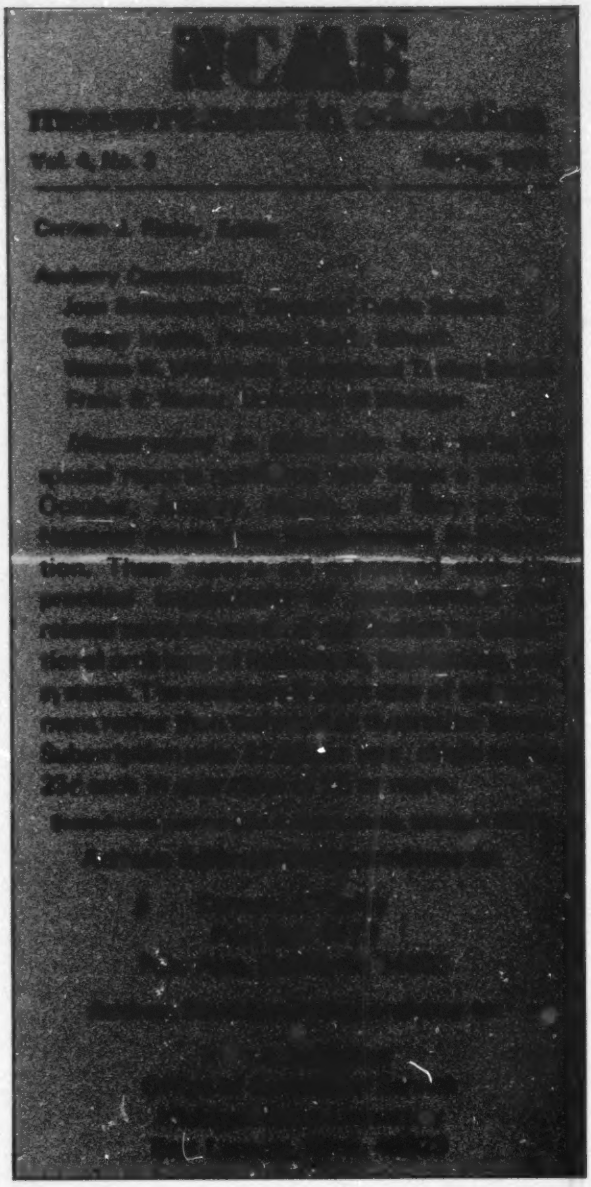
In developing such lists of affective goals, it is often difficult to keep essential criteria in mind. The evaluation specialist needs continually to remind himself that although there are many kinds of affective behavior that human beings carry on, only those behavior patterns that students are expected to develop through schooling are appropriate to assess as educational achievement. This is not only a real restriction but a considerable one. A few examples may serve to illustrate this.

A psychologist may be interested in ascertaining the extent to which different classes of students feel proud of the specific racial or ethnic group to which they belong, but this particular affective behavior is not generally accepted by the school or college as one of its major objectives. A political scientist may wish to know whether students become more liberal rather than conservative in their political views and actions as they complete courses in the social sciences, but the development of particular political affiliations is not accepted as a school objective. Another investigator may wish to find out the extent to which different groups of young people respond emotionally to pornographic material, but such a study is not an appraisal of educational achievement since schools are not seeking to develop in their students certain patterns of emotional response to materials of this sort.

Even the development of interest in school subjects may not be an appropriate educational objective unless the definition of these patterns of affective behavior differentiate them from interests that appear to be warped by teaching efforts that, in effect, lure most, if not all, students into one or two fields. Schools and colleges are more likely to select as an objective the helping of students to find meaning and satisfactions in all major fields of study so that their choices of further work can be made without being too much influenced by distortions of the attractiveness of a particular field.

There are two main principles that should be carefully considered in reviewing proposed objectives in the affective domain. One is the political principle that the function of the school in a democratic society is to help the student gain the means for increasing independence in judgments and action, and not to indoctrinate particular political or sectarian views. The other is the ethical principle that each individual has a right to privacy not to be invaded by the school.

Historically, as mankind has moved from a folk society in which most of the behavior of the individual was closely prescribed by the culture to one in which a greater variety of individual behavior was accepted, the indoctrination of children and youth by the sanctioned authorities was increasingly circumscribed, until today the state through its schools is enjoined from teaching sectarian religious beliefs and partisan politics. Along with this has developed a growing body of doctrine regarding the civil liberties of the individual. This has included an increasing area of behavior that is considered the "privacy of the individual." It is now quite widely accepted that neither the school nor other institutions of the society have the right to invade this privacy by requiring the individual to conform in his behavior to some arbitrary group norm. Hence, today, the school can expect parents, taxpayers or other lay citizens to question educational objectives that appear to involve invasion of privacy as well as to seek injunctions against the school's teaching sectarian religion or partisan politics. The school must be prepared to justify every major objective in terms of values widely accepted by the lay public or expressly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stated in the Constitution and statutes. This is particularly important for objectives in the affective domain because their values are not widely recognized and there is not the long tradition to sanction them as there is with the 3 R's.

The tasks of identifying and defining objectives that would be approved by lay citizens was undertaken by the National Assessment Project. The most difficult problems were encountered in the field of citizenship where affective behavior patterns as well as cognitive and psychomotor ones were proposed by the panels of scholars and school people. The identification of attitudes and values that are not politically partisan and do not invade privacy required a good deal of study, discussion, review and revision. Objectives based on the belief in the dignity and worth of the individual without regard to race, religion, income or ethnic background survived because the Constitution establishes this as a basic value of our country. One main category of objectives that were approved reads:

I. Show concern for the well-being and dignity of others.

A. Treat others with respect.

B. Consider the consequences for others of their own actions.

C. Guard safety and health of others.

D. Offer help to others in need.

E. Support equal opportunity in education, housing, employment and recreation.

F. Are loyal to country, to friends, and to other groups whose values they share.

G. Are ethical and dependable in work, school, and social situations.

A second main category was headed:

II. Support just law and the rights of all individuals.

It included among its sub-heads:

C. Defend rights and liberties of all kinds of people.

However, beliefs in particular political ideals, beliefs or policies whether they are labeled liberal or conservative were not accepted as proper school objectives by the lay panels. Furthermore, a justice of a state supreme court who was a member of one of the lay panels questioned the legality for a public school to espouse any objective that could not clearly be related to overt acts on the ground that how an individual feels and what one believes are not proper concerns of the state and its schools unless the goal can be clearly shown to be inseparably linked to socially acceptable or unacceptable overt behavior. This freedom of the individual to make his own choices, to develop his own belief system and to experience and express his own feelings whether or not they are shared by the majority of the society is thus seen as constrained only by their clear, dynamic connection to illegal acts or by demonstrated negative effects upon the individual himself. This is an important caveat in selecting objectives in the affective domain.

ASSESSING INTERESTS

The term interest is commonly defined in lists of objectives as "liking an object or activity," or as "choosing an object of activity when the individual has time and opportunity for voluntary selection of the object to which he attends or the activity in which he engages." A review of many courses of study shows that interests in activities are much more common in lists of objectives than interests in objects. Thus, one will find very frequently statements of objectives like the following: developing interests in reading, developing interests in listening to music, developing interests in conducting inquiries, developing interests in solving mathematical problems rather than developing interests in books, in pianos, in natural phenomena, in problems. Schools are seeking to help their students develop a liking for these kinds of activities, and/or developing practices of choosing to carry on these activities when they have opportunity to do so.

A school objective in the area of interests can be justified when the activity involved can contribute to the individual's development, social competence, or life satisfaction. Thus, developing interests in learning in all major fields of knowledge is appropriate for the school because this choice of the use of the individual's free time helps him to build a more comprehensive and accurate picture of the world, which is an important part of human development. On the other hand, to develop a preoccupation with learning in one or two fields may contribute to his social effectiveness as a specialist in this and it may add to his life satisfaction, but to the degree that it limits his learning in other fields it may be an undesirable kind of interest to develop. Hence, most curriculum leaders recommend that the school seek both to broaden and deepen the individual student's interests, broaden in the sense of choosing to devote some of his free time to learning things of importance in the various fields of knowledge, and deepen in the sense of choosing to spend part of his free time pursuing one or more special interests as far as he can do so.

In addition to considering breadth and depth in assessing interests, another frequently mentioned characteristic is the quality or maturity of the activities in which the student develops interests. For example, most teachers of literature seek to help students develop interests in books that they believe to be of high quality or appropriate for the mature reader. When our literary culture was relatively stable, certain authors or books were viewed as exemplars of the best. They were the classics of the time. In this period, the quality of the student's interests in literature could be appraised by the proportion of his voluntary reading that was classified as "reading the classics."

As the literary culture became more dynamic, old standards were questioned and teachers could no longer justify a particular list of books or authors as comprehending all those of high quality. In fact, to many teachers, the notion of a single scale of quality seemed inappropriate and they shifted to the concept of maturity of the books in contrast to immaturity or to complexity of the ideas in contrast to simplicity. In such cases, the objective was to help students develop liking for or to make choices of books that were relatively mature or complex, and the measure became the proportion of the student's voluntary reading that could be classified as "mature" or "complex." The judgment of the degree of maturity or complexity of authors widely read by high school and college students was made in the Eight Year Study – 1933-41 – by a panel composed of literary critics and teachers. These judgments placed each author in one of six categories from most immature to most mature. The placement was then validated by the analysis of a year's reading record for each of 3000 students evenly distributed in age from 13-18 years inclusive. The mean age of students who read the work or works of an author was used as the empirical index of maturity. When these empirical indices were correlated with the placements made by the panel the resulting coefficient of .91 indicated a striking degree of agreement.

In the Eight Year Study, the breadth and depth of reading interests were indicated by classifying books and periodicals into subject classes for nonfiction and types for fiction, and then using the number of subjects and types which the student's reading for the year included as the measure of breadth and the number of books read in the two subjects and types where his greatest amount of reading was done as the measure of depth. In this way, the Eight Year Study furnished three measures of reading interests for each student – breadth, depth and maturity. Obviously, this is only one example of an assessment program for reading interests, but it serves to indicate the possibility of working out assessment measures from a relatively clear definition of the objectives sought by the schools.

Although most schools seek to arouse and develop interests in the activities involved in learning and using school subjects, they would not accept the view that these interests should be so central as to exclude activities of importance

that are not central to school work, such as those involved in recreation, in home and community life, and in purely personal enjoyment that do not usually depend on school learning for their effective performance. For this reason, another aspect of assessing interests is to ascertain the extent of balance among interests in school-related activities and other opportunities students have in using their free time.

Vivian Weadon's investigations carried on at the Ohio State University in the 30's demonstrated that an anchor list of a dozen activities for a given age group could be selected that had meaning to the students and furnished a stable frame of reference for their interest against which interests in other activities could be appraised. This stable list for 16-year-olds included as the most interesting at that time – going to the movies and least interesting – going to the dentist. Using the twelve activities in this list and six to twelve school-related activities, the total could be arranged in triads as in the Kuder Preference Record, so that the individual student could indicate for each triad the activity he liked best and the one he liked least. In this way, a scale is formed in which the student's liking for each school-related activity is placed in the frame of the stable list of non-school activities. This furnishes a basis for measuring the balance of interests expressed by the student.

The foregoing discussion relates primarily to the definition of an interest objective and the derivation of indices appropriate to the definition. There is another major aspect of the assessment process, namely, collecting valid and reliable data. For data about the activities in which the student voluntarily engages, observational methods are possible when the purpose is to assess the interests of a group, but observational methods are generally impractical as a means of obtaining reliable data regarding the individual's choice of activities because the largest segment of the free time of most students is in situations removed from the school. Hence, a self-report procedure is more commonly used. This may be in the form of a continuing record as was done with reading in the Eight Year Study, or a questionnaire or interview procedure in which the student is asked to state what he did in a certain period of time, or other similar questions.

For data about the activities that students like or dislike, self-reports are likely to be more valid than inferences drawn by an observer or reports of parents or teachers. Effective rapport is more likely obtained when an interview method or a small group discussion is used, but the interest questionnaire if taken seriously by the student is a more efficient way of eliciting this information. It is, of course, important to make clear and to establish credibility for the statement that the information obtained from self-reports has nothing to do with marks or grades and will not be used for such purposes.

ASSESSING ATTITUDES

As mentioned earlier, although the term attitudes appears in most lists of educational objectives, the classification of the particular attitudes listed is often ambiguous. In some cases, the emphasis seems to be placed on cognitive rather than affective aspects. When the objective implies that the purpose is to help the student perceive certain phenomena in a particular context, the emphasis is clearly cognitive. When the objective is concerned with helping the student restructure his system of beliefs, whether this be in science, in social studies, in literature, in music or in other arts, the emphasis is on developing a more comprehensive conception of reality, which is also cognitive.

However, when the definition implies the development of feelings or the control of feelings in certain situations, the emphasis is on the affective domain. In most of the school subjects teachers seek to help students "open their minds and hearts" to more varied considerations and to a wider range of experience than they have considered or encountered in their past. Human beings often develop an emotional attachment to their belief systems, their habits, their patterns of attention and activity that closes off new perceptions, new ideas, new activities, new standards and new goals. The development of greater openness in these respects is a legitimate objective of a public school or college and is commonly stated as "developing an objective attitude" toward the particular matters with which the course deals.

In science, the development of objective attitudes toward alternative possible explanations of natural phenomena is accepted as a desirable and proper educational goal. This is seen by laymen as essential to scientific inquiry and valuable to those who would utilize the products of science. Similarly, in the social studies, the development of objective attitudes toward alternative possible explanations of social phenomena and toward alternative policies for dealing with social problems is quite generally accepted by lay panels as essential to social progress and to supporting intelligent efforts to solve or alleviate social problems. For example, among the citizenship objectives approved for the National Assessment by lay panels were: V. Understand Important World, National and Local Civic Problems, and VI. Approach Civic Decisions Rationally, which included among its subheads: A. Seek relevant information and alternative viewpoints on civicly important decisions. B. Evaluate civic communications and actions carefully as a basis for forming and changing their own views.

Among the objectives in literature, music and the other arts there are those that refer to "willingness to read new types of literature," "listens to new musical works," "examines new art forms," "feels free from attachment to the familiar works and is able to explore new ones." Lay panels generally accept as appropriate goals developing desires to explore the meaning and the aesthetic characteristics of works of art that are new to the student, whereas developing a preference for a particular type of literature or for a certain specific style or school of art is sometimes viewed as an unwarranted invasion of privacy on the ground that this would indoctrinate the student with the particular tastes or biases of the teacher.

In all of these fields, the objective attitudes that the school seeks to help the student develop have an important cognitive component, that is, the recognition of the worth of objectivity in building scientific knowledge, in dealing with social problems and in judging the quality of works of literature and the other arts, but, in addition, there is a significant emotional element involved in freeing the student from the cozy, comfortable feeling of the familiar to permit genuine exploration of the new.

This affective portion of an objective attitude is not assessed simply by finding out whether the student believes in being objective but by ascertaining the feeling he has about exploring new things or ideas that are relevant to the educational program. A valid assessment should seek to identify his present relevant beliefs and then to find out what consideration he has given to alternative beliefs, and what effort he is making to gain other views and to weigh other alternatives. These are indications of the extent of his control over his biases and prejudices.

The original attitude scales devised by L. L. Thurstone and his students sought to measure the position of the individual's views on such issues as attitude toward God, attitude toward war and attitude toward Communism. The measures were derived from the individual's endorsement of a sampling of statements of beliefs on such issues representing various positions, from believing in God to denying the existence of God, from favoring war to being against war, from supporting the ideas of Communism to opposing them. These scales have been used extensively for psychological studies but most of them are not appropriate as measures of the attainment of school objectives in the affective domain because they focus primarily on what the individual believes, which is largely cognitive rather than how he feels. Furthermore, most of the scales deal with issues in connection with which the school's accepted function is to help the student explore these issues thoughtfully in an effort to reach his own conclusions rather than to lead him to adopt a particular position. When the issues sampled by an attitude scale are clearly part of the Constitution or other basic tenets of the American tradition, such as, belief in the inalienable rights of every human being, belief in due process and the like, the scale is relevant to accepted school objectives, and may be a helpful device for appraising cognitive aspects of attitude objectives.

Some devices for measuring attitudes ask the individual to indicate the extent of his support for a stated position in such terms as "Favor it," "Feel strongly about it," "Feel very strongly about it." If the statements on which the individual is asked to respond are appropriate for the educational goals of objectivity, openness, freedom from uncritical attachments to traditional positions, desire to explore new ideas, scales of this sort have some face validity. However, pupils often believe that anything that they express to the school staff may be used in setting their grades or marks, so that some checks need to be made of the honesty of response to questionnaires of this sort. Some teachers and other school personnel have developed excellent rapport with their students so that their responses are usually sincere. The assurance that the individual's replies will be kept anonymous and will have nothing to do with his grades will also help. Unharried, friendly interviews and group discussions are useful devices for checking questionnaire responses. For this reason, their greater expense in time and the greater care required to design the interview schedules and discussion guides can be justified.

ASSESSING VALUES

When the development of values is listed as an educational objective, it is usually based on an argument that runs somewhat as follows. Many of our interests, choices, preferences and commitments grow out of the connection that is perceived or believed to exist between the objects of interest, choice, preference and commitment and something else that we value deeply. For example, we may choose spinach at a meal not because we like spinach but because we value good health and believe that eating spinach is a contribution to good health. In this illustration the value that we cherish is good health. As another example, we may give a donation to the Community Chest not because we like the Community Chest but because we value the idea of charitable giving, and we perceive the Community Chest as an avenue for charitable giving. The value that we cherish in this example is charitable giving. As a third example, we may purchase relatively expensive orchestral recordings not because these recordings are the "in things" today but because we believe them to be excellent samples of aesthetic qualities, and we greatly cherish aesthetic values.

The argument then proceeds: Since human beings learn to value certain objects, activities, and ideas so that these become important directors of their interests, attitudes and satisfactions, the school should help the student discover and reinforce values that might be meaningful and significant to him in obtaining personal happiness and making constructive contributions to society. From this premise, various more particular objectives can be justified.

However, school objectives in this field need to be carefully stated and defined so as to avoid unconstitutional teaching and unwarranted invasion of the student's privacy. The development of values that are commonly viewed as sectarian in religion or partisan in politics clearly should not be the function of the public school. But there are social and aesthetic values as well as those related to good health that are generally accepted by the public. For example, in the area of citizenship lay panels approved for the National Assessment the following, among others:

I. Show Concern for the Well-Being and Dignity of Others

F. Are loyal to country, to friends and to other groups whose values they share.

G. Are ethical and dependable in work, school, and social situations.

IV. Participate in Democratic Civic Improvement

A. Believe that each person's civic behavior is important, and convey this belief to others.

VII. Help and Respect Their Own Families

B. Instill civic values and skills in other family members.

Although the wording of these statements does not directly mention values except in I. F and VII. B, it seems reasonable to interpret all of the above as involving the development of values. "Concern for the well-being and dignity of others" is roughly equivalent to "values and seeks to enhance the well-being and dignity of others." "Loyal to country, to friends and to other groups whose values they share" is roughly equivalent to "values and seeks to enhance the well-being of country, friends and others." "Believe that each person's civic behavior is important, and convey this belief to others" implies that the student "values and seeks to enhance constructive civic behavior on his part and on the part of others." "Help and respect their own families" implies "values and seeks to enhance the well-being of his own family," while "Instill civic values and skills in other family members" suggests "values constructive civic activities and their skillful performance and seeks to help other family members to acquire these values and develop civic skills."

In art, literature and music, lists of objectives often include the development of aesthetic values. Such statements as the following appear: Learns to value works of art which exemplify such aesthetic qualities as balance, variety of texture, effective use of color, and the like. Values literary works that meet various aesthetic criteria such as unity, complexity, illusion of reality. Seeks music that satisfies aesthetic standards and is not trite. Among the music objectives approved for the National Assessment by lay panels was VI. Make Judgments about Music and Value the Personal Worth of Music.

Curriculum guides in the field of health education mention such goals as Places high priority on maintaining personal health, Values good health more than having a good

time. Seeks to contribute to the health of the community in general as well as his own. The National Assessment has not up to this time worked on the field of health education so that no evidence is available from this source regarding the approval of health objectives by lay panels. However, the strong endorsement of public health programs by citizen groups indicates the high value placed on health by the lay public and suggests that objectives like the foregoing would be acceptable goals for public schools.

The definition of a value as an object, activity or idea that is cherished by an individual which derives its educational significance from its role in directing his interests, attitudes and satisfactions implies that an assessment should furnish opportunity for the student to make choices that can be perceived as connected to particular values. It is not enough to ask him whether he values certain things since he may interpret this solely in abstract terms and not see the connection with real choices that he confronts. It is not enough merely to find out about the choices he makes since the values that guide his choices may be quite different from those that we would perceive. Hence, the testing situation appears to require opportunities for choices and for the student to state why he made these choices. This two-stage test exercise was the type used in the Eight Year Study and in the Cooperative Study in General Education to obtain information about the values students considered in making the kinds of choices they commonly have to make.

The construction of testing devices of this sort requires the identification of those values that are among the school's objectives. Then, a collection needs to be made of a sample of the choices students are commonly confronting that are relevant to these values. For example, in selecting foods health is a relevant value. In purchasing records or selecting radio programs aesthetic values are relevant. In choosing friends or giving assistance to someone, social values are involved. Whether the test is to be paper-and-pencil, an interview, or a group discussion, each choice situation needs to be presented in words, pictures or dramatic skits so as to be understood by the students being assessed. Each student is asked about the choices he would make and why. The interview and group discussion afford an opportunity for the evaluator to ask further questions after the student indicates in each exercise his own choice and the reason for it. These additional questions can help to clarify the value that he considered most important and also help to find out whether he perceived any connection with some other relevant values. This permits an appraisal of the student's dominant values that are appropriate to the objective and also the degree to which he perceives relevant value connections in the choices he makes.

This testing device does not separate the cognitive aspect of value development from the affective component. It may be that for some students their choices are matters of cool, detached selection involving little or no feeling tone. It is conceivable that their choice criteria are not matters of deep emotional commitment. But, if the school defines cherishing a value as an objective in the affective domain, it implies that the verb cherish is one involving feeling. How can the evaluator obtain evidence regarding the student's feelings about particular values?

Perhaps the most direct evidence is obtained in group discussions or informal interviews in which the choices are examined in various ways and different alternatives are proposed. The feeling of the individual can be inferred from his voice, the content of his comments and the persistence of the same choice in spite of questions regarding other alternatives. With good rapport, the student's report of how strongly he feels about the choice is likely to be sincere. But it is not easy to disentangle the cognitive from the affective factors in the operation of human values. Perhaps, this is an area of student achievement where the distinction between the two domains is not of primary importance.

ASSESSING APPRECIATION

The use of the term appreciation in lists of educational objectives occurs most frequently in the fields of literature, art and music. When the term appears in science, social studies or mathematics its meaning seems to be largely cognitive. For example, "Appreciates the contributions of science to modern technology," is largely equivalent to "knows ways in which science contributes to the development of modern technology." On the other hand, in literature, art and music, the term appears to include affective behavior as well as the cognitive. In literature, for example, appreciating is quite commonly used to include "judging the worth of a literary work" and also "responding emotionally to the work." When the latter meaning is emphasized, the objective can be classified in the affective domain.

The Committee on the Evaluation of Reading in the Eight Year Study selected the following seven kinds of reactions to reading as of considerable importance to English teachers.[1]

1. Satisfaction in the thing appreciated.

   Appreciation manifests itself in a feeling on the part of the individual of keen satisfaction in and enthusiasm for the thing appreciated. The person who appreciates a given piece of literature finds in it an immediate, persistent, and easily-renewable enjoyment of extraordinary intensity.

2. Desire for more of the thing appreciated.

   Appreciation manifests itself in an active desire on the part of the individual for more of the thing appreciated. The person who appreciates a given piece of literature is desirous of prolonging, extending, supplementing, renewing his first favorable response toward it.

3. Desire to know more about the thing appreciated.

   Appreciation manifests itself in an active desire on the part of the individual to know more about the thing appreciated. The person who appreciates a given piece of literature is desirous of understanding as fully as possible the significant meanings which it aims to express and of knowing something about its genesis, its history, its locale, its sociological background, its author, etc.

4. Desire to express one's self creatively.

   Appreciation manifests itself in an active desire on the part of the individual to go beyond the thing appreciated, to give creative expression to ideas and feelings of his own which the thing appreciated has chiefly engendered. The person who appreciates a given piece of literature is desirous of doing for himself, either in the same or in a different medium, something of what the author has done in the medium of literature.

5. Identification of one's self with the thing appreciated.

   Appreciation manifests itself in the individual's active identification of himself with the thing appreciated. The person who appreciates a given

[1] Smith and Tyler, Appraising and Recording Student Progress, pp. 248-9, Harpers, New York, 1942.

piece of literature responds to it very much as if he were actually participating in the life situations which it represents.

6. Desire to clarify one's own thinking with regard to the life problems raised by the thing appreciated.

   Appreciation manifests itself in an active desire on the part of the individual to clarify his own thinking with regard to specific life problems raised by the thing appreciated. The person who appreciates a given piece of literature is stimulated by it to re-think his own point of view toward certain of the life problems with which it deals and perhaps subsequently to modify his own practical behavior in meeting those problems.

7. Desire to evaluate the thing appreciated.

   Appreciation manifests itself in a conscious effort on the part of the individual to evaluate the thing appreciated in terms of such standards of merit as he himself, at the moment, tends to subscribe to. The person who appreciates a given piece of literature is desirous of discovering and describing for himself the particular values which it seems to hold for him.

This example of an effort to define appreciation of literature in terms of the purposes of teachers in the thirty schools is one illustration of the multifaceted conception of this objective. It clearly includes affective behavior as well as cognitive. The evaluation staff developed several instruments for assessing the reactions of students to their reading. Three of them used the questionnaire technique which, when rapport was established, proved quite valid. The items in the questionnaires were derived from an analysis of ways in which the seven types of reaction to reading might be manifested in both readily observable and covert types of behavior. For example, questions relating to "satisfaction in the thing appreciated" included among others: "Is it unusual for you of your own accord, to spend a whole afternoon or evening reading a book?" "Do you ever read plays, apart from the school requirements?"

As another example, questions relating to "Identification of One's Self with the Thing Appreciated" included among other questions: "Have you ever tried to become in some respects like a character whom you have read about and admired?" "Is it very unusual for you to become sad or depressed over the fate of a character?"

In 1938, as part of the project Evaluation of School Broadcasts, Gus Wiebe compared three ways of appraising the reactions of students to particular musical selections: questionnaire, interview and measurement of skin conductivity of each student while the selection was being played. Skin conductivity is dependent upon the amount of palmar sweat which is believed to be an index of physiological reactions accompanying emotional responses. Most persons are not able to control their perspiration. Hence, they cannot fake this physiological response. Wiebe found that when rapport had been established with the students their responses both to the appreciation questionnaire and to the interview were highly consistent with the measures of skin conductivity. This implies validity for questionnaire or interview methods in assessing responses to particular musical selections.

CONCLUDING COMMENT

I hope that the foregoing discussion illustrates the possibilities and problems involved in assessing student achievement of objectives in the affective domain. The problems lie not only in the difficulty of appraising emotional responses that are often covert but also in selecting and defining objectives that are proper goals for the public schools. This means affective behavior that is of constructive value to the individual, that can be developed through school experience, that is not sectarian nor politically partisan and is not an unwarranted invasion of privacy. When objectives meeting these conditions are identified and defined, it is possible to assess, at least crudely, the student's achievement of these behavior patterns.

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